

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:

Claim 1 (previously presented): A method comprising:

- a) providing a spectrometer;
- b) arranging the spectrometer with respect to an amniotic sac of a pregnant mother to acquire a spectrum of amniotic fluid *in situ* without insertion of any instrument into said amniotic sac;
- c) using said spectrometer to acquire said spectrum; and
- d) processing said spectrum to predict a risk of developing a medical condition in at least one of said pregnant mother and her offspring based on a predetermined correlation between spectra of amniotic fluid and the likelihood of developing said medical condition.

Claim 2 (previously presented): The method as claimed in claim 1, wherein said spectrometer is a Raman spectrometer.

Claim 3 (previously presented): The method as claimed in claim 1, wherein said arranging comprises directing said spectrometer to analyze said amniotic fluid through an abdominal wall.

Claim 4 (previously presented): The method as claimed in claim 1, wherein said arranging comprises directing said spectrometer to analyze said amniotic fluid through a cervix.

Claim 5 (previously presented): The method as claimed in claim 4, further comprising acquiring ultrasound images of the amniotic sac during said arranging to direct or confirm that said spectrometer will acquire said spectrum without interference of said pregnant mother's offspring.

Claim 6 (previously presented): The method as claimed in claim 1, further comprising:
e) determining at least one of a dietary intervention and a therapeutic intervention in response to finding that at least one of said pregnant mother and her offspring risks developing said medical condition.

Claim 7 (previously presented): The method as claimed in claim 6, wherein steps a) to e) are repeated during said pregnant mother's pregnancy.

Claim 8 (previously presented): The method as claimed in claim 6, wherein said pregnant mother is human, and steps a) to e) are first performed before 12 weeks of said pregnant mother's pregnancy.

Claim 9 (previously presented): The method as claimed in claim 8, wherein an amniocentesis is performed after steps a) to e) are first performed.

Claim 10 (previously presented): The method as claimed in any one of claims 7 to 9, wherein steps a) to e) are repeated at least three times during said pregnant mother's pregnancy.

Claims 11–12 (canceled)

Claim 13 (previously presented): The method as claimed in claim 1, wherein said spectrometer is an optical spectrometer.

Claim 14 (previously presented): The method as claimed in claim 13, wherein said arranging comprises directing said spectrometer to analyze said amniotic fluid through an abdominal wall.

Claim 15 (previously presented): The method as claimed in claim 13, wherein said arranging comprises directing said spectrometer to analyze said amniotic fluid through a cervix.

Claims 16–23 (canceled)

Claim 24 (currently amended): ~~The A method comprising: as claimed in claim 16, wherein in step b);~~

a) providing an optical spectrometer;

b) using said spectrometer to acquire a spectrum of amniotic fluid of a pregnant mother, wherein said optical spectrometer is arranged with respect to the pregnant mother's amniotic sac to acquire a spectrum of said amniotic fluid *in situ* without insertion of any instrument into said amniotic sac and wherein the amniotic fluid is analyzed without processing said fluid to separate or concentrate its components; and

c) processing said spectrum to predict a risk of developing a medical condition in at least one of said pregnant mother and her offspring based on a predetermined correlation between spectra of amniotic fluid and the likelihood of developing said medical condition.

Claim 25 (previously presented): The method as claimed in claim 24, wherein said arranging comprises directing said optical spectrometer to analyze said amniotic fluid through an abdominal wall.

Claim 26 (previously presented): The method as claimed in claim 24, wherein said arranging comprises directing said optical spectrometer to analyze said amniotic fluid

through a cervix.

Claims 27–35 (canceled)

Claim 36 (currently amended): The An apparatus for predicting a risk of developing a medical condition in at least one of a pregnant mother and her offspring, the apparatus comprising as claimed in claim 30, further comprising:

an optical spectrometer adapted to acquire a spectrum of amniotic fluid from said pregnant mother;

an optical coupler adapted to arrange said optical spectrometer with respect to said pregnant mother's amniotic sac to acquire a spectrum of said amniotic fluid *in situ* without insertion of any instrument into said amniotic sac; and

a processing unit for processing said spectrum to predict a risk of developing a medical condition in at least one of said pregnant mother and her offspring based on a predetermined correlation between spectra of amniotic fluid and the likelihood of developing said medical condition.

Claim 37 (canceled)

Claim 38 (previously presented): The apparatus as claimed in claim 36, wherein said coupler is adapted to arrange said optical spectrometer to analyze said fluid through an abdominal wall.

Claim 39 (previously presented): The apparatus as claimed in claim 36, wherein said coupler is adapted to arrange said optical spectrometer to analyze said fluid through a cervix.

Claim 40 (previously presented): The apparatus as claimed in claim 36, wherein said coupler is adapted to operate in contact with said pregnant woman in a position near

said amniotic sac.

Claim 41 (canceled)

Claim 42 (previously presented): The method as claimed in claim 2, wherein said Raman spectrometer operates in the near-infrared range.

Claims 43–46 (canceled)

Claim 47 (previously presented): The apparatus as claimed in claim 36, wherein said optical coupler is comprised within an endo-vaginal probe.

Claim 48 (previously presented): The apparatus as claimed in claim 47, wherein said endo-vaginal probe also functions as an ultrasound device.

Claim 49 (previously presented): The apparatus as claimed in claim 36, wherein said optical coupler comprises an optical source and two optical detectors.